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A Feasibility Test of an Online Intervention to Prevention Dating Violence in Emerging Adults

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Abstract

Dating violence in emerging adults is a significant problem and few prevention programs based on the developmental needs of this age group have been developed. Our research team developed an online dating violence prevention program called WISER (**W**riting to **I**mprove **S**elf-in-**R**elationships) for emerging adults. The program is based on narrative therapy principles and uses structured writing techniques. A single group pre-post feasibility test of WISER was conducted with 14 college women. WISER was demonstrated to be feasible and acceptable and to show promise as an effective program to decrease dating violence in this population.

Keywords

Dating violence; emerging adults; writing intervention

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A Feasibility Test of an Online Program to Prevent Dating Violence in Emerging Adults

Dating violence, the perpetration of physical, sexual, or emotional abuse against a dating partner, is a major public health problem in the United States (CDC, 2016). In dating violence, aggressive behaviors are often enacted by both partners (CDC, 2016; Fernández-González, O'Leary, & Muñoz-Rivas, 2014; Haynie et al., 2013; O'Leary, Slep, Avery-Leaf, & Cascardi, 2008). Dating violence is associated with a number of negative health effects, including stress disorders, depression, anxiety, suicidality, physical complaints, and substance use (CDC, 2016; Foshee, McNaughton Reyes, Gottfredson, Chang, & Ennett, 2013; Haynie et al., 2013).

Although dating violence prevention programs delivered to middle and high school students, have been shown to be effective (National Institute of Justice, 2014), programs for dating violence prevention in emerging adults (EAs) (ages 18–25) are rare (Banyard, 2014). Although the prevalence of dating violence that begins in adolescence later declines during emerging adulthood (Fernández-González et al., 2014), dating violence remains a significant problem. The International Dating Violence Study (Straus, 2004) revealed that approximately 28% of university students in the United States have experienced a physical assault in a dating relationship (Chan et al., 2008). Moreover, injuries stemming from dating violence increase in women after age 18 (Fernández-González et al., 2014).

Interventions targeted to EAs could disrupt patterns of partner violence that extend into adulthood. Arnett (2006) argues that emerging adulthood differs in meaningful ways from late adolescence (ages 16–17) and young adulthood (ages 26–35). In Western societies, EAs are likely to delay marriage/parenting, seek higher education, change jobs frequently, and engage in pre-marital sex and cohabitation (Arnett, 2006). The dating relationships of EAs are often transitory and exploratory but facilitate the development of the interpersonal skills needed to form and maintain mature partner relationships (Furman & Collibee, 2014). Dating relationships that include aggression and violence, however, can lead to a pattern of intimate partner abuse throughout adulthood (Smith, White, & Holland, 2003; Wolitzky-Taylor et al., 2008).

Most dating violence prevention programs include primary prevention psycho-educational curricula drawn from social learning theories (Whitaker et al., 2006). While many prevention programs are based on the assumption that a lack of knowledge and skill deficits account for dating violence behaviors, few programs are based on developmental theories (Whitaker et al., 2006). If dating violence prevention programs are not grounded in principles related to the unique developmental needs of EAs, the programs will not be well-suited to this age group and unlikely to facilitate long-term behavior change (NIJ, 2017).

The theory of narrative identity indicates that EAs engage in formal operational thinking and begin to construe their lives as autobiographical stories – narratives that shape their identity and provide unity and meaning to their lives (McAdams, 1985; McAdams & McLean, 2013; Singer, 2004). Relational schemas, which are cognitive structures that organize one's knowledge and views about relationships (Baldwin & Dandeneau, 2005), are foundational to

the life narratives of EAs. The concept of relational schema is reflected in several relationship and developmental theories. Behavioral systems theory, for example, focuses on the construct of *views of romantic relationships*, which are representations of the self, the partner, and the relationship that shape expectations regarding intimacy (Furman & Wehner, 1994). Adult attachment theory (Hazan & Shaver, 1987) poses that romantic views in adults are similar to attachment bonds formed between parents and infants. In this theory, adults can be categorized as having one of three attachment styles. These include secure attachment (i.e., positive views of self and relationships), avoidant attachment (i.e. views of self as independent with little need for close relationships), or anxious/ambivalent attachment (i.e., uneasy views of self with need for approval and responsiveness from partners) (Hazan & Shaver, 1987).

More recent research on relational views has revealed that they vary along two basic dimensions: attachment avoidance and attachment anxiety (Jones & Furman, 2011). Attachment avoidance in romantic relationships is marked by discomfort with intimacy, preference for self-reliance, rejection of giving/receiving support from a partner, and associating sex with self-gratification (Jones & Furman, 2011). Attachment anxiety in romantic relationships is marked by worries about rejection, dependence on a partner for support and esteem, excessive concern for a partner's well-being, and self-sacrificing behaviors (Jones & Furman, 2011).

Studies have demonstrated that secure attachment is associated with positive interaction patterns including better conflict resolution and communication and greater affective expression and dyadic positivity in adult (Alexandrov, Cowan, & Cowan, 2005;; Treboux, Crowell, & Waters, 2004) and young adult intimate partner relationships (Roisman, Collins, Sroufe, & Egeland, 2005). Conversely, insecure attachment is associated with physical and psychological aggression (Fournier, Brassard, & Shaver, 2011; Péloquin, Lafontaine, & Brassard, 2011) in adult intimate partner relationships.

The concept of relational schema can provide a pivotal link in understanding the development of habitual relational aggression in EAs (Author et al., 2012). For example, a schema marked by high attachment avoidance could lead to conflict when a partner seeks intimacy, whereas a schema marked by a high attachment anxiety could lead to conflict when a partner engages in pursuits independent of the relationship (Author, Author, & Stephenson, 2012). Because schemas have continuity over time, EAs with problematic schemas would be at risk to experience similar conflicts in all their romantic relationships. Relational risk factors that stem from such conflicts, such as negative interactions, jealousy, low support, and low relationship satisfaction, can in turn lead to dating aggression or violence (Collibee & Furman, 2016; Novak & Furman, 2016). Because EAs begin to cement their relational schemas as they enter young adulthood, an intervention that modifies their problematic schemas could disrupt an emergent pattern of troubled intimate relationships and reduce the likelihood of aggression or violence in subsequent relationships. No such program currently exists for the EA population.

Experts have called for a more strengths-based approach to violence prevention (Hamby, Banyard, & Grych, 2016). Narrative therapy is a strengths-based approach in which people

who have problem-saturated life stories “rewrite” their stories to be more satisfying and fulfilling (White, 2007; White & Epson, 1990). A basic tenet of narrative therapy is that people’s troubles are rooted in dominant cultural narratives stemming from oppressive structures (e.g., abuse, discrimination, gender inequality). The goal of narrative therapy is to challenge these structures and open spaces for new narratives (White, 2007; White & Epson, 1990). Narrative therapy offers a promising approach to facilitating the revision of problematic relational schemas in EAs (Combs & Freedman, 2016).

Our research team developed an online program that uses strategies drawn from narrative therapy to modify problematic relational schemas associated with conflict and aggression in intimate partner relationships among EAs. We chose an online platform because given this age group’s pervasive use of technology, it is likely that within the next decade most health promotion and mental health services will be delivered to them through the Internet (Abbott, Klein, & Ciechomski, 2008; Lerner & Steinberg, 2009). In our online program, EAs write stories related to their relational schemas and receive feedback on their stories from peer advisors. The program is called **Writing to Improve Self-in-Relationships (WISER)**. The process that the team used to develop the program and the components of the program are described in more detail elsewhere (Author, author, author, author, & author, 2017). This article describes a feasibility trial of WISER in a small group college women.

Methods

Design

We conducted a single-group pre-post feasibility study to examine the usability of the WISER website and the feasibility and acceptability of the WISER program to prepare to test WISER in a future clinical trial. A secondary aim was to explore whether the program would lead to changes in problematic relational schemas, relationship quality, and intimate partner aggression. The study was approved by the Institutional Review Board at the research team’s institution, Indiana University Purdue University Indianapolis (IUPUI).

Participants

Although WISER will be eventually developed to meet the needs of diverse groups of EAs, for this study we recruited college students from the IUPUI campus. IUPUI is an urban public research university that serves approximately 30,000 students. By recruiting from IUPUI, the researchers had convenient access to a large group of EAs. Moreover, given the sensitive nature of the program, the university’s counseling center was available to provide mental health services should participants need them while participating in WISER.

The inclusion criteria were as follows: (a) ability to read and write English, (b) 18 and 25 years of age, and (c) self-identified as currently being in a troubled relationship or having been in a troubled relationship in the past. Because EAs often reject the term dating violence, and we wished to recruit participants who had conflictual as well as overtly violent intimate partner relationships, we defined troubled relationships broadly. We informed potential participants that a troubled intimate partner relationship is one that makes them feel distressed, anxious, or unhappy and can include anything from put-downs and insults to

physical or sexual abuse by one or both partners. The exclusion criteria of the study was acute psychological distress that would make participation in the study above an acceptable risk.

Recruitment

On-the-ground recruitment throughout the campus was conducted by research assistants. Fliers that contained information about the study were placed in high traffic areas (e.g., bulletin boards, display cases, library tables) and distributed at tabling events at the campus student center. In addition, students who participated in a survey study being conducted by our research team about young adult relationships, which had the same baseline instruments as the pilot study, were invited to join the WISER study if they met eligibility criteria.

The recruitment fliers invited potential participants to log into a study portal where they learned more about the study, answered eligibility questions, provided informed consent, completed a demographic data form, and completed baseline study questionnaires. They were then given access to the WISER registration page. To register for the WISER program, participants were directed to set up a secure password and answer three security questions in the event they needed to reset their passwords. Once registered, the participants were given access to the WISER welcome page.

WISER Program

WISER is a four-session program that was completed by participants entirely online using a computer. Each session used a narrative therapy strategy (called a “WISER idea”) to identify and challenge a problematic relational schema and provided participants an opportunity to explore how they might modify the schema to achieve more satisfying relationships. The WISER welcome page provided a description of the program and links to download two documents. The WISER Guide Sheet is an info-graphic that facilitated participants’ movement through the WISER program. The WISER Handbook provided more details about the program and general information about healthy intimate partner relationships.

We referred to relational schema with the more user-friendly term of *me-in-my-relationships*, which we defined for participants as “the typical way that individuals think, feel, or act in relationships regardless of who the other person is.” For each session, the participants watched a brief video of an EA actor telling the story of his or her troubled relationship based on one of four “WISER ideas” (described below). The participants then wrote their own stories modeling them on the actor’s story and uploaded the stories to the website. Within a few days, they received a written response from a peer advisor.

The study investigators had developed a response template for each session that provided the advisors with a standard structure and suggested wording for the responses. The templates were designed to provide some standardization of the responses while allowing for tailoring to the participants’ unique stories. Each response reflected the thoughts, feelings, and actions in the participant’s story; commented on the WISER idea in the story; and introduced the next session. Once the participants received and read the advisor’s response, they could then begin the next session. Throughout the program, the participants received emails from their advisors that introduced the advisors, alerted participants that their advisors’ responses were

available to view, and reminded participants to upload their stories if they had not done so after several day.

In Session One, participants wrote a story in which they identified a *me-in-my-relationships* problem – a characteristic way they think, act, or feel in their intimate partner relationships that “gets in the way” of them having satisfying relationships (e.g., always needing to control a partner’s behaviors). In Session Two, participants wrote a story in which they identified a constraining message - a message from society or their family and friends that supports or encourages their *me-in-my-relationships problem* (e.g., messages in the media that women are responsible for their partners’ feelings). In Session Three, participants wrote a story in which they identified a *unique outcome* - a moment when their *me-in-my-relationships problem* was “not at play” (e.g., despite the need to please one’s partner, one attends a friend’s birthday party over the partner’s objection). In Session Four, participants wrote *my preferred story* – an imagined story in which they “took a stand on” their *me-in-my-relationships problem* (e.g., one enjoys an evening apart from a partner without constantly checking up on him or her).

Peer Advisors

Because research suggests EAs feel others close to their age are more relatable than older adults in understanding relationship concerns (Author, author, Bednarz, & Lea, 2014), young adults served as peer advisors. The qualifications required for the peer advisors are a bachelor’s degree in a counseling, mental health, or a health-related discipline and an interest in health and wellness in a college population. The advisors, three women and one man, attended an 8-hour didactic and experiential training session led by the study investigators, both of whom are experienced mental health clinicians and experts in interpersonal violence. During the session, the advisors learned how to write the responses, practiced writing them for a variety of types of stories, and received feedback from the investigators and other advisors.

Intervention Fidelity

The study investigators reviewed each advisor’s response before it was sent to the participants. To enhance fidelity to the principles of WISER, the investigators developed an evaluation rubric to assess whether the advisors accurately addressed all the necessary elements of the advisor response. The investigators edited the advisors’ responses if any of these elements were missing and provided on-going supervision to the advisors.

Measures

In addition to completing a set of baseline questionnaires before beginning the WISER program (T1), the participants completed the questionnaires at two additional time points. After completing the fourth session, they were sent an email with a link to a second round of questionnaires and an evaluation of the WISER program (T2). At two months following the participants’ completion of the WISER program, they were sent an email with a link to a third round of study questionnaires (T3). Participants received \$120 in gift cards for completing the three sets of questionnaires. The following questionnaires were completed by the participants:

Experiences in Close Relationships Scale – Short Form (ECR-S)

(Wei, Russell, Mallinckrodt, & Vogel, 2007). Attachment anxiety and attachment avoidance were measured with the ECR-S. The ECR-S is a 12-item, short form of the Experiences in Close Relationship Scale (Brennan, Clark, & Shaver, 1998). Item scores, which ranged from 0 to 6, were summed to obtain Anxiety and Avoidance sub-scale scores. Low scores indicate secure attachment whereas high scores reflect insecure attachment. The ECR-S possesses a stable factor structure and acceptable internal consistency, test-retest reliability, and construct validity (Wei et al., 2007).

Relationship Assessment Scale (RAS)—(Hendrick, Hendrick, & Adler, 1988). For those participants in a current intimate partner relationship, relationship quality was measured with the RAS, a 7-item measure using a 5-point Likert scale to measure the level of satisfaction or distress in one's romantic relationships. Scores can range from 7 to 35 with higher scores indicating more satisfaction. The scale has demonstrated adequate validity, test-retest reliability, and measurement consistency across diverse groups (Hendrick, Dicke, & Hendrick, 1998).

The revised Conflicts Tactics Scale–Short Form (CTS2S)—(Straus & Douglas, 2004). For those participants in a current intimate partner relationship, the CTS2S was used to measure the extent to which they used aggression and negotiation to resolve conflicts with their partners. The CTS2S, a widely used instrument for measuring interpersonal violence, consists of items that inquire about the frequency with which respondents engage in aggressive or negotiating behaviors with a partner followed by an item that inquires about the frequency with which the partner engages in the same behavior with the respondent. While the original scale inquires about the frequency of behaviors in the past year, for the purpose of this study, we modified the scale to ask about frequency of behaviors in the past month. The 20-items are based on a 8-point Likert scale with response choices including a range of behavioral frequencies (e.g., *3–5 times in the past month*). The mid-point range of the response choices were used to determine the frequency of negotiation or aggressive acts for each item and were summed to create scores on the following subscales: negotiation, psychological aggression, physical aggression, physical injury, sexual coercion, victimization, and perpetration. The CTS2S has well-established psychometric properties (Straus & Douglas, 2004).

The WISER Program Evaluation—This questionnaire was developed for the purpose of this study. The questionnaire consists of 21 items measured on a 5-point Likert scale that asks participants to rate the usability of the WISER website and the acceptability of the WISER program. The questionnaire also includes three open-ended questions that ask participants what was helpful or not helpful about the WISER program and what they would change.

Data Analysis

The demographic make-up of the sample, including sex, age, and race/ethnicity, was described using descriptive statistics. To examine feasibility, the number of persons who logged into the study portal and the rates of initial program engagement, completion of each

WISER session, completion of the entire WISER program, and completion of measures at T1, T2, and T3 were calculated. Numbers and percentages of participant responses to the items on the WISER Program Evaluation questionnaire and a narrative summary of participant responses to the open-ended items were used to examine the acceptability of the program.

To address the exploratory aim, outcomes were summarized at each visit. Effect size for the scales were calculated as Cohen's *d*: the difference of means at T2 and T3 minus T1 divided by the pooled standard deviation. The 95% confidence intervals were generated by resampling subjects' data with replacement to generate 2000 bootstrap samples and calculate Cohen's *d* for each sample. The 2.5th and 97.5th percentile of the distribution were the limits for the confidence intervals. Statistical significance was identified by 0 not being included in the 95% confidence interval for the effect sizes. Consistent with Cohen's guidelines, effect sizes are considered small if ≥ 0.2 , moderate if ≥ 0.5 and large if ≥ 0.8 (Cohen, 1988). Whether the effect sizes were significant or not, we noted if changes in the preliminary outcome variables were in the directions we would anticipate if the intervention was effective; for example, we would anticipate that scores on indices of attachment anxiety and avoidance and relationship aggression would decrease, whereas scores on indices of relationship quality and negotiation would increase.

Results

Participants

All the students (100%) who participated were female. Eleven were White (79%), one was Black (7%), one was Asian (7%), and one was mixed race (7%). One participant (7%) was age 25, four (29%) were 21, three (14%) were 20, two (10%) were 19, and two (14%) were 18.

Feasibility

The participant flow through the program is displayed in Figure 1. Of the 29 students who logged into the study portal, three students (10%) were ineligible to participate; two were ineligible because they were not in, or had not been in, a troubled relationship, and one was under 18. None were ineligible because they were experiencing an acute psychological crisis. All 26 students who were eligible (100%) logged into the study portal, provided consent, and completed the study instruments. Sixteen (62%) of the eligible participants completed the first WISER session, and 11 (42%) completed the second WISER session. In addition, three students who participated in separate survey studies conducted by the research team participated in WISER (having already completed the baseline instruments) and completed all the sessions. All 14 participants who completed the second session completed the entire WISER program and the T2 questionnaires, and 13 participants completed the T3 questionnaires.

The WISER Program Evaluation

Participants responses to the items on the WISER program evaluation are displayed in Table 1. Below we combined response of “very” and “mostly” to indicate usability/acceptability and responses of “slightly” or “not at all” to indicate non-usability/ unacceptability.

Website usability.—The usability of the website was assessed with items 1 to 11 on the WISER Evaluation Form. All participants (100%) reported that they found the website easy and convenient to use, and that it was easy to answer the eligibility questions, register for the WISER program, access the WISER sessions, upload their stories to their advisors, and receive the written responses from their advisors. In addition, the majority of the participants reported that the website kept their interest and attention (71%), they liked how the website looked (79%), the consent form was easy to read and complete (86%), and the questionnaires were easy to complete (93%).

In response to the open-ended questions, several participants confirmed that the website was easy to navigate. One stated, “As far as the website goes, it was highly functional and easy to use.” A few participants, however, suggested the website appearance could be improved. One said it was “outdated,” and another said it “wasn’t very aesthetically pleasing.” The later participant suggested, “Why not create a website to have a relaxing color scheme and font, like a spa style? Whites, light blues, light browns, grays, etc. Just a thought.”

Acceptability of delivery of content.—The primary content of the program included information about the “WISER ideas” and instructions about moving through the program. This content was delivered from four sources: on multiple website screens, in the actor videos, on WISER Guide Sheet, and in the WISER Handbook. The acceptability of these sources was assessed with items 12 to 15. All the participants (100%) found the information presented on the website screens to be helpful. While the a majority of the participants liked the actor videos (64%) and found WISER Guide Sheet (64%), and Handbook (64%) to be helpful, a small number found the videos (14%), the WISER Handbook (14%), and the WISER Guide Sheet (21%) to be unacceptable.

The open-ended responses revealed why some participants did not find some of the sources of content delivery to be acceptable. Whereas one participant found the videos to be the most helpful aspect of the WISER program, others thought the actors were not engaging, the videos were boring, a “skit” might have been preferable, and the material presented on the videos could have as easily been read. One participant remarked that the WISER Guide Sheet was not helpful, and another remarked that the WISER Workbook was too long.

Acceptability of WISER activities.—The primary program activities were writing the stories and reading the advisors’ responses to the stories. The acceptability of these WISER activities and the time it took to complete the sessions and the program as a whole were assessed with items 16 to 19. The majority of participants (85%) found it helpful to write the stories. Responses to the open-ended questions indicated that several participants felt that writing about their *me-in-my-relationships problem* (Session One) to be the most helpful. One stated,

By giving my problems a name and identifying solutions, I have a very clear plan on how to fix them. Instead of my usual ambiguous, 'I'm going to try to work on my relationship,' I can focus my energy specifically on my me-in-my-relationships problem.

One participant found writing *my preferred story* (Session Four) to be the most helpful because it "helped me realize what I was looking for," whereas another participant said this story did not help her "discover much." One participant did like not writing about a *unique moment* (Session Three) because she did not feel like she had ever had such an experience.

The majority of the participants also reported that it was helpful to receive their advisor's responses to their stories (86%). In the open-ended responses, several remarked that they felt the advisor responses were the most helpful part of the WISER, but a couple of participants felt that the responses only repeated what they said in their stories or were too "mechanical" in nature.

All the participants (100%) liked the length of time it took to complete the sessions. The majority (93%) liked the length of the program.

Perceived outcomes.—The extent to which the participants believed that WISER helped them reflect on their relationships and make them more satisfying were assessed with questions 20 and 21. All the participants (100%) thought the program helped them reflect on their relationships, and all (100%) thought the program helped them to make their relationships more satisfying. In the open-ended responses, participants indicated that the program helped them gain insight about their relationships, look "more deeply at the layers involved" with their relationships, think through past experiences in an "organized" way, and make the troubled relationship seem "real." One participant remarked,

Writing about my experiences in that relationship was helpful to me. Until now I have kept all of it inside because I wasn't comfortable telling anyone about how long I stayed in such a toxic relationship. Just getting all of that out made me feel freed from all of the negative aspects of the relationship.

Preliminary Outcomes

Table 2 shows the means and standard deviations of the measures at baseline (T1), post-program (T2) and 2-month follow-up (T3). Because the ECR-S (Wei et al., 2007) asks respondents how they feel about relationships generally, it did not require participants to be in a current relationship. Therefore, all WISER participants (N = 14) completed this questionnaire. The RAS (Wei et al., 2007) and the CTS2-S (Straus & Douglas, 2004) were completed only by those participants who were currently in relationship with an intimate partner (n = 9).

On the ECR-S Anxiety sub-scale (Wei et al., 2007), the effect sizes between T1 and T2 (Cohen's $d = .22$) and T1 and T3 (Cohen's $d = .17$) were small, non-significant, and not in the predicted direction. On the Avoidance sub-scale, the effect size between T1 and T2 (Cohen's $d = -.33$) was also small, non-significant, and in the predicted direction, and the

effect size between T1 and T3 (Cohen's $d = -.60$) was medium, non-significant, and in the predicted direction.

On the RAS (Hendrick et al., 1988), the effect size between T1 and T2 (Cohen's $d = .34$) was small, non-significant, and in the predicted direction, and the effect size between T1 and T3 (Cohen's $d = .67$) was medium, significant, and in the predicted direction.

On the CTS2-S (Straus & Douglas, 2004), the effect sizes between T1 and T2 were medium, significant, and in the predicted direction on the Psychological Aggression Scale (Cohen's $d = -.62$), the Physical Aggression Scale (Cohen's $d = -.61$), and the Perpetration Scale (Cohen's $d = -.66$); small, significant, and in the predicted direction on the Injury Scale (Cohen's $d = -.49$); and small, non-significant, and in the predicted direction on the Sexual Coercion Scale (Cohen's $d = -.12$) and the Victimization Scale (Cohen's $d = -.49$). On the Negotiation Scale, the effect size (Cohen's $d = .41$) was small, non-significant and in the predicted direction.

On the CTS2S (Straus & Douglas, 2004), the effect sizes between T1 and T3 were medium, non-significant, and in the predicted direction on the Psychological Aggression Scale (Cohen's $d = -.63$) and small, non-significant, and in the predicted direction on the Sexual Coercion (Cohen's $d = -.12$), Victimization (Cohen's $d = -.49$), and Perpetration (Cohen's $d = -.44$) Scales. However, the effect sizes were small, non-significant and not in the predicted direction on the Physical Aggression Scale (Cohen's $d = .15$) and small, non-significant and not in the predicted direction on the Injury Scale (Cohen's $d = .50$). The effect size for the Negotiation Scale was small, non-significant, and in the predicted direction (Cohen's $d = .31$).

Because the changes on the Physical Aggression and Injury scores between T1 and T3 suggest an increase rather than decrease in violence, we examined the responses of individual participants on these two sub-scales and found that increases occurred with only two participants. One participant appeared to have had one physical altercation with a partner in which they were both aggressive toward one another. The second participant endorsed all items, except the negotiation items, as occurring "once within the past month" which is the first column on the scale. Although we can not verify this, we suspect this might have been a response error as she endorsed this same response for all the aggression items.

Discussion

The findings of this feasibility study support the potential of WISER to address relational schemas, improve relationship quality, and decrease dating aggression in EAs at risk of ongoing intimate partner aggression and violence. The findings suggest that the WISER program is feasible, acceptable to EAs, and potentially effective.

Our study demonstrated that by recruiting participants on campus we were able to recruit, enroll, and retain 14 college women for the WISER program. While there was a fair amount of attrition between consent and Session Two, all participants who completed Session Two completed the whole program. Non-completion of WISER, therefore, tended to happen early

in the program. The findings of a systematic review of online mental health prevention interventions by Clarke, Kuosmanen, & Barry (2015) indicated that non-completion rates were typically moderate to high and that face-to-face and/or web-based support contributed to program completion. We surmise that participants who reached Session Two had developed an alliance with their peer advisor and/or were confident that they could write the kind of stories that the program required. This suggests that strategies to increase retention early in the program would improve overall rates of study completion.

We did not demonstrate that is feasible to recruit a diverse sample to the WISER program through routine on-the-ground campus recruitment. Although we included both men and women and ethnically diverse persons on our fliers, and although our recruiters, peer advisors, and video actors were from diverse backgrounds, all participants who completed WISER were women, and the majority were White. Before conducting a full clinical trial of WISER, we will conduct focus groups with a variety of diverse groups of EAs and develop strategies to specifically target these groups as well as determine if there are aspects of the WISER program that do not appeal to these groups.

Our finding that the WISER program was highly acceptable was similar to a conclusion of the Clarke et al. (2015) review. The review revealed that when the acceptability of online youth mental health prevention programs are assessed, acceptability rates tend to be high (Clarke et al., 2015). The few indications that some elements of WISER were not highly acceptable to participants will guide us in making adaptations to the intervention. The negative comments we received about the aesthetics of the website, the quality of the videos, and the usefulness of the WISER Handbook and Guide will be addressed by redesigning these elements to be more aesthetically appealing, useful, and favorable to EAs. Finally, we will address the few participant concerns that the advisor responses were too rote by enhancing the templates to allow for more tailoring to participants' individual situations.

Our findings, although preliminary, are consistent with other studies that reveal the promise of using computer-based interventions with EAs in order to improve their relationships and decrease physical aggression. Braithwaite & Fincham (2011), for example, have developed a computer-based program called EPREP that provides skill training for communication and problem solving for university students in romantic relationships using weekly emails. The intervention has shown to be effective in decreasing physical assault and severe physical aggression, increasing dedication and constructive communication, increasing relationship satisfaction in men, and decreasing depression in women.

The findings regarding our preliminary outcomes are promising. We were encouraged that all of the participants reported they believed that the WISER program helped them reflect on their relationships and make their relationships more satisfying. Moreover, most means on the outcome measures changed in the predicted directions. While attachment anxiety did not decrease as predicted, the moderate effect size from baseline to follow-up on attachment avoidance suggests that the intervention has the potential to impact relational schema. Importantly, significant decreases were noted in several indices of aggression, suggesting that the intervention has the potential to decrease dating violence. Several other effect sizes were moderate, but not statistically significant, which might be attributable to our small

sample size. Unpredicted increases in physical aggression and injury on follow-up were seemingly attributable to one physical altercation experienced by one participant, and there was no other indication that WISER overall increased violence or aggression among partners.

Limitations

These findings should be understood in the context of the limitations of our study. Because this was a proof-of-concept feasibility study, we did not include an attention-control or treatment-as-usual group and it is therefore possible that noted changes in our outcome measures could be due to time passage or repeated measurement. As mentioned above, our sample size limited our statistical power. Also, our sample was homogeneous in regards to ethnicity and gender, and thus generalizability is limited. In addition, we did not collect data on sexual orientation or gender identity. These factors would be important in both describing our sample and in interpreting our results and will be included in our next test of WISER.

Another study limitation was that due to our small sample and one group pre-post test design, we were unable to determine which components of the intervention will likely contribute most the study outcomes. For example, we were unable to calculate how much the peer advisors' responses to the participants' stories, as opposed to the information they received on the website and from the actors on the videos, contributed to the changes in outcomes. This will be important to determine in a future fully powered trial as while we believe the personalization of the intervention enabled by the peer advisors was an important component to the intervention, we could not substantiate this assumption in this study. The experience of writing the stories, for example, rather than receiving personalized responses from the advisors, might be the most potent component of the intervention. Determining which components of the intervention are more efficacious will be important in future trials to ensure the cost-effectiveness and enhance the sustainability of WISER.

Future Steps

Because WISER is offered on the Internet, employs peer advisors rather than licensed professionals, and uses templates so the responses can be crafted efficiently, we believe the program can be sustainable and eventually offered to EAs throughout the country in a cost-effective way. By addressing relational schema, rather than focusing on skill development, it is our hope that WISER may result in more enduring changes in relationship quality and long-term decreases in dating aggression. Our next steps, therefore, are to modify the intervention based on the results of this feasibility study and to conduct a full clinical trial of the WISER program.

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Highlights

- An online dating violence program called WISER (Writing to Improve Self-in- Relationships) was developed for emerging adults.
- The program is based on narrative therapy principles and uses structured writing techniques,
- In single group pre-post feasibility test of WISER with 14 college women, the intervention was shown to be feasible and acceptable and to show promise as an effective intervention for this population.

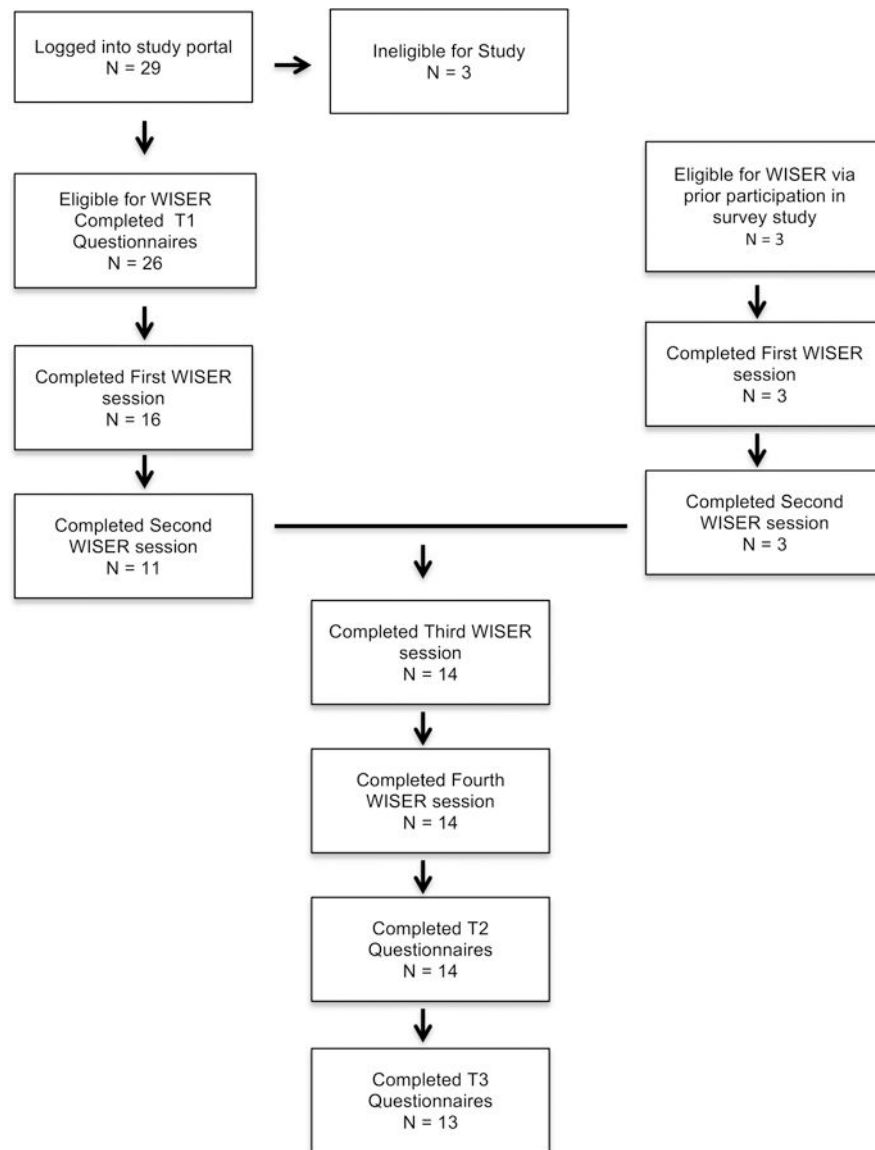


Figure 1.
Flow diagram of participants entering into study

Table 1.**WISER Program Evaluation Responses: Website Usability and Program Acceptability**

Questions	Responses					
	Very n (%)	Mostly n (%)	Somewhat n (%)	Slightly n (%)	Not at all n (%)	Missing n (%)
<u>Website Usability</u>						
1. How easy was the WISER website to use?	13 (92.86)	1 (7.14)	0 (0)	0 (0)	0 (0)	0 (0)
2. How convenient was the WISER website to use?	11 (78.57)	3 (21.43)	0 (0)	0 (0)	0 (0)	0 (0)
3. How much did the WISER website keep your interest and attention?	6 (42.85)	4 (28.57)	4 (28.57)	0 (0)	0 (0)	0 (0)
4. How much did you like how the WISER website looked?	6 (42.85)	5 (35.71)	0 (0)	2 (14.29)	0 (0)	1 (7.14)
5. When you registered for WISER you were asked questions about your age, whether you speak English and whether you have ever been in a troubled relationship. How easy was it to answer those questions?	14 (100.00)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
6. Before you were able to complete your WISER registration, you were asked to read and sign a form that had a lot of information about the WISER research study and what you would be asked to do. How easy was it for you to read and complete that form?	10 (71.43)	2 (14.29)	2 (14.29)	0 (0)	0 (0)	0 (0)
7. How easy was it to complete the questionnaires about your relationships?	9 (64)	4 (28.57)	1 (7.14)	0 (0)	0 (0)	0 (0)
8. How easy was it to register for the WISER program?	12 (85.71)	2 (14.29)	0 (0)	0 (0)	0 (0)	0 (0)
9. How easy was it to access the WISER sessions?	11 (78.57)	2 (14.29)	0 (0)	0 (0)	0 (0)	1 (7.14)
10. How easy was it to upload your stories to your advisor?	13 (92.86)	1 (7.14)	0 (0)	0 (0)	0 (0)	0 (0)
11. How easy was it to receive the written responses from your advisor?	12 (85.71)	2 (14.29)	0 (0)	0 (0)	0 (0)	0 (0)
<u>Acceptability of Delivery of Content</u>						
12. How helpful was the information provided on the WISER website?	9 (64.29)	5 (35.71)	0 (0)	0 (0)	0 (0)	0 (0)
13. How much did you like the videos of the actors	5 (35.71)	4 (28.57)	3 (21.43)	2 (14.29)	0 (0)	0 (0)

Questions	Responses					
	Very n (%)	Mostly n (%)	Somewhat n (%)	Slightly n (%)	Not at all n (%)	Missing n (%)
playing young adults struggling with troubled relationships?						
14. How helpful was the WISER Guide Sheet?	5 (35.71)	4 (28.57)	2 (14.29)	1 (7.14)	2 (14.29)	0 (0)
15. How helpful was the WISER Handbook?	7 (50)	2 (14.29)	3 (21.43)	1 (7.14)	1 (7.14)	0 (0)
<u>Acceptability of WISER Activities</u>						
16. How helpful was it to write your stories?	6 (42.85)	6 (42.85)	2 (14.29)	0 (0)	0 (0)	0 (0)
17. How helpful were the advisor responses to your stories?	7 (50.00)	5 (35.71)	2 (14.29)	0 (0)	0 (0)	0 (0)
18. How well did you like the length of the program (e.g. four sessions)?	10 (71.43)	3 (21.43)	1 (7.14)	0 (0)	0 (0)	0 (0)
19. How well did you like the length of time it took to complete each session?	10 (71.43)	4 (28.57)	0 (0)	0 (0)	0 (0)	0 (0)
<u>Perceived Outcomes</u>						
20. How much do you think the program helped you reflect on your relationships?	9 (64.29)	5 (35.71)	0 (0)	0 (0)	0 (0)	0 (0)
21. How much do you think the program will help you make your relationships more satisfying?	11 (78.57)	3 (21.43)	0 (0)	0 (0)	0 (0)	0 (0)

Table 2.

Preliminary Outcomes

	Time 1 (baseline) Mean (SD) n	Time 2 (post- program) Mean (SD) n	Time 3 (2-month follow-up) Mean (SD) n	Cohen's D (95% confidence interval) Time 2 – Time 1	Cohen's D (95% confidence interval) Time 3 - Time 1
ECR-s Anxiety sub-scale ¹	28.07 (5.50) 14	29.07 (3.73) 14	28.92 (4.61) 13	0.22 (−0.47,0.91)	0.17 (−0.48,0.81)
ECR-S Avoidance sub-scale ¹	21.50 (3.59) 14	20.50 (2.56) 14	19.31 (4.07) 13	−0.33 (−1.07,0.30)	−0.60 (−1.51,0.27)
RAS ²	25.89 (5.73) 9	27.44 (3.81) 9	29.38 (5.29) 8	0.34 (−0.36,1.20)	0.67 (0.04,1.70) *
CTS2-S Negotiation Scale ³	21.33 (14.82) 9	15.50 (15.78) 8	27.13 (24.32) 8	−0.41 (−1.19,0.12)	0.31 (−0.83,1.23)
CTS2-S Psychological Aggression Scale ³	9.56 (16.82) 9	2.25 (4.20) 8	2.25 (2.92) 8	−0.62 (−1.42,−0.36) *	−0.63 (−1.42,0.23)
CTS2-S Physical Aggression Scale ³	0.56 (1.33) 9	0.00 (0.00) 8	0.75 (1.49) 8	−0.61 (−1.39,−0.54) *	0.15 (−1.10,1.72)
CTS2-S Sexual Coercion Scale ³	1.00 (2.65) 9	0.75 (1.49) 8	0.75 (1.49) 8	−0.12 (−0.46,1.10)	−0.12 (−0.90,1.53)
CTS2-S Injury Scale ³	0.22 (0.67) 9	0.00 (0.00) 8	0.75 (1.49) 8	−0.49 (−1.10,−0.54) *	0.50 (−0.79,2.00)
CTS2-S Victimization Scale ³	6.33 (11.01) 9	2.38 (4.14) 8	2.50 (3.51) 8	−0.49 (−1.28,0.30)	−0.49 (−1.36,0.98)
CTS2-S Perpetration Scale ³	5.00 (9.55) 9	0.63 (1.41) 8	2.00 (3.21) 8	−0.66 (−1.41,−0.37) *	−0.44 (−1.24,0.88)

Notes:

¹Wei et al., 2007²Hendricks et al., 1988³Straus & Douglas, 2004* **Significant effect size**, 0 not included in 95% confidence level